

REMARKS

The claims have been amended to obviate the objections and to correct or cancel the claims rejected under 35 USC § 112. The objection to claims 2, 24 and 39; and the rejection of claims 13, 19, 21, 23 and 39 under 35 USC § 112 should be withdrawn. Non-elected claims 15-17 and 40 have been canceled without prejudice to filing a divisional patent application after revival of the parent application.

Claims 1-14, 18-23 and 25-38 stand rejected under 35 USC § 102(b) as anticipated by Barbee 6,384,121 ('121).

The remaining claims have been amended to define the surface modifier and a polyamide matrix polymer as containing a same amine group, e.g., the xylylendiamine group of claim 25. While Barbee '121 discloses a xylylendiamine component in the matrix polymer, Barbee '121 intercalates the clay with a typical quaternary ammonium compound, such as octadecylammonium ions. As set forth at paragraphs [0063], [0079], [0099] and on page 26: "Xylelene-Containing Polyamides (Intercalants) and Layered Silicate Materials Intercalated With m-Xylylene-Containing Polyamide Oligomer (Intercalates)" of applicants' specification, it is preferred that the polyamides for use as a matrix polymer are the same as the intercalant (preferably m-xylylenediamine as the diamine that is reacted with the diacid). This amine matching between the intercalant and the matrix polymer results in superior barrier properties 0.04 cc mm/m² (paragraph [0122]) and superior thermal stability.

Since Barbee '121 neither discloses nor suggests having a same amine group in both the surface modifier intercalant and the matrix polymer, it is submitted that the rejection of claims 1-14, 18-23 and 25-38 under 35 USC § 102(b) should be withdrawn.

Claims 1-12 and 20-39 stand rejected under 35 USC § 102(b) as anticipated by, or in the alternative under 35 USC § 103(a) as obvious over Lan et al. 6,232,388 ('388). Like Barbee '121, Lan '388 intercalates the clay with a typical quaternary ammonium compound, such as octadecylammonium ions. As set forth at paragraphs [0063], [0079], [0099] and on page 26: "Xylelene-Containing Polyamides (Intercalants) and Layered Silicate Materials Intercalated With m-Xylylene-Containing Polyamide Oligomer (Intercalates)" of

applicants' specification, it is preferred that the polyamides for use as a matrix polymer are the same as the intercalant (preferably m-xylylenediamine as the diamine that is reacted with the diacid). This amine matching between the intercalant and the matrix polymer results in superior barrier properties 0.04 cc mm/m² (paragraph [0122]) and superior thermal stability.

Claims 24 and 39 stand rejected under 35 USC § 103(a) as being unpatentable over Barbee '121. For the reasons set forth above in response to the rejection over Barbee '121 under 35 USC § 102(b), Barbee neither discloses nor suggests a common amine group in the both the intercalant surface modifier and the polyamide matrix polymer. It is submitted, therefore, that the rejection of claims 24 and 39 under 35 USC § 103 should be withdrawn.

Claims 13 and 14 stand rejected under 35 USC § 103(a) as being unpatentable over Okada et al. 4,894,411 ('411). The polyamine swelling agent of Okada et al. '411 neither discloses nor suggests a matrix polymer, as a separate element from the intercalant surface modifier, that have the same amine group. For the reasons set forth above with respect to Barbee '121 and Lan '388, it is submitted that the rejections of claims 13 and 14 under 35 USC § 103 should be withdrawn.

An earnest attempt has been made to respond to all objections and rejections set forth in the outstanding office action. Early and favorable consideration is respectfully requested.

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Respectfully submitted,

By: /Richard H. ANDERSON, Reg. #26,526/
Richard H. Anderson
Registration No.: 26,526
MARSHALL, GERSTEIN & BORUN LLP
233 S. Wacker Drive, Suite 6300
Sears Tower
Chicago, Illinois 60606-6357
(312) 474-6300
Attorney for Applicant